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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,383	11/04/2003	Jean-Francois Savouret	RICL-110 (69769-011)	5818

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EXAMINER	
KEYS, ROSALYND ANN	
ART UNIT	**PAPER NUMBER**
1621	

MAIL DATE	DELIVERY MODE
12/11/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/700,383	SAVOURET ET AL.	
	Examiner	Art Unit	
	Rosalynd Keys	1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9 and 11-32* is/are pending in the application.

4a) Of the above claim(s) *9 and 14-25* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11-13 and 26-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *9 and 11-32* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

1. Claims 9 and 11-32 are pending.

Claims 11-13 and 26-32 are rejected.

Claims 9 and 14-25 are withdrawn from consideration.

Claims 1-8 and 10 are canceled.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 31, 2007 has been entered.

Election/Restrictions

3. Claims 9 and 14-25 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on May 2, 2005.

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 28 and 31 are rejected under 35 U.S.C. 102(a) as being anticipated by M. Feuerstein et al. (Tetrahedron Letters, Vol. 43, No. 12, March 2002, pp. 2191-2194).

Feuerstein et al. teach the claimed compound of formula I, wherein R3, R5 and R4' are CF3 and R3', R5' and R4 are H (see Scheme 2 on page 2193).

7. Claim 28 is rejected under 35 U.S.C. 102(b) as being anticipated by Meier et al. (Tetrahedron Letters, Vol. 37, No. 8, February 1, 1996, pp. 1191-1194).

Meier et al. teach the compound having the claimed formula I (see pages 1192 and 1193, in particular compounds 9a, 9e, 10a and 10e).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 11-13, 26-29 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suga (US 5,530,030) in view of Silverman (The Organic Chemistry of Drug Design and Drug Action, 1992, pp. 15-19).

Suga teaches a compound and composition similar to the claimed compound having the formula I, wherein R3 and R5 are Cl, R4 is H, R3' is OH or OMe, and R4' and R5' are H (see Table 1, in particular compound 7 and its methoxy form; and column 3, lines 46 to column 4, line 10). The Examiner believes that the amounts disclosed in Table 3 are within the claimed dosage range. These compounds differ from the claimed compounds in that in the claimed compounds R3' is not OH or OMe. However, they can be F, Cl, or O-C_2-C_6 alkoxy.

Silverman teaches that biological properties of homologous compounds show regularities of increase and decrease (see page 16). Silverman also teaches that OH, F, and Cl

are classical isosteres ; that bioisosteres are substituents or groups that have chemical and physical similarities, and which produce broadly similar biological properties ; and that bioisosterism is a lead modification approach that has been shown to be useful to attenuate toxicity or to modify the activity of a lead (see page 19).

One having ordinary skill in the art at the time the invention was made would have been motivated to modify the compounds of Suga by either substituting OH with Cl or F; or by substituting OMe with a higher homolog, as taught by Silverman, with the expectation of obtaining a compound which has broadly similar biological properties with either modification of the compounds activity; or an increase or decrease in its potency or pharmacological effect.

12. Claims 11-13 and 26-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goodman (US 6,022,901) in view of Silverman (The Organic Chemistry of Drug Design and Drug Action, 1992, pp. 15-19).

Goodman teaches a pharmaceutical composition comprising resveratrol (3,5,4'-trihydroxy stilbene). See entire disclosure. The pharmaceutical compositions may be in the form of solid, semi-solid or liquid dosage forms, such as, for example, tablets, suppositories, pills, capsules, powders, liquids, suspensions, creams, ointments, lotions or the like. The compounds may be administered orally, parenterally, transdermally, rectally, nasally, buccally, and topically (see column 6, line 19 to column 8, line 37). The amount of active compound will vary but is generally ranges from about 0.5 to 2.0 mg/kg (see column 8, lines 38-48).

The compound of Goodman differs from the instant compound by a known bioisosteric replacement (see Silverman, in particular page 19, wherein it is taught that OH, F, and Cl are classical isosteres). Silverman further teaches that bioisosteres are substituents or groups that have chemical and physical similarities, and which produce broadly similar biological properties (see page 19). It is taught that bioisosterism is a lead modification approach that has been shown to be useful to attenuate toxicity or to modify the activity of a lead.

One having ordinary skill in the art at the time the invention was made would have found it obvious to substitute the OH groups of resveratrol, as taught by Goodman, with either a Cl group or a F group, since Silverman teaches that these substituents are classical isosteres.

13.

Response to Arguments

Rejection of claims 11-13, 26-29 and 32 under 35 U.S.C. 103(a) as being unpatentable over Suga (US 5,530,030) in view of Silverman (The Organic Chemistry of Drug Design and Drug Action, 1992, pp. 15-19)

14. Applicant's arguments filed October 31, 2007 have been fully considered but they are not persuasive. Suga teaches a compound which is structurally similar to the claimed compound except that the claims exclude the possibility of when R3 and R5 are Cl that R3' is OH. The Examiner does not believe that this equates to a teaching away from the claimed invention, especially since all the Applicants have done is substitute a known bioisosteric replacement for either the OH or the Cl atoms of Suga (see Silverman which teaches that biological properties of homologous compounds show regularities of increase and decrease (see page 16) and that OH, F, and Cl are classical isosteres (see Table 2.2 on page 19). One having ordinary skill in the art at the time the invention was made would have found it obvious to interchange F, Cl, or OH, with one another or methoxy with ethoxy, as taught by Silverman on the compound of Suga with the expectation of obtaining similar biological properties.

The claims are therefore considered prima facie obvious.

Rejection of claims 11-13 and 26-32 under 35 U.S.C. 103(a) as being unpatentable over Goodman (US 6,022,901) in view of Silverman (The Organic Chemistry of Drug Design and Drug Action, 1992, pp. 15-19)

15. Applicant's arguments filed October 31, 2007 have been fully considered but they are not persuasive because based upon the teaching of Silverman one having ordinary skill in the art at the time the invention was made would have found it obvious to interchange the OH substituents of Goodman with either a F or a Cl atom with the expectation of obtaining similar biological properties.

The claims are therefore considered prima facie obvious.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rosalynd Keys whose telephone number is 571-272-0639. The examiner can normally be reached on M, R & F 5:30-7:30 am & 1-5 pm; T & W 5:30 am-4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne Eyler can be reached on 571-272-0871. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Rosalynd Keys/
Primary Examiner
Art Unit 1621

December 7, 2007